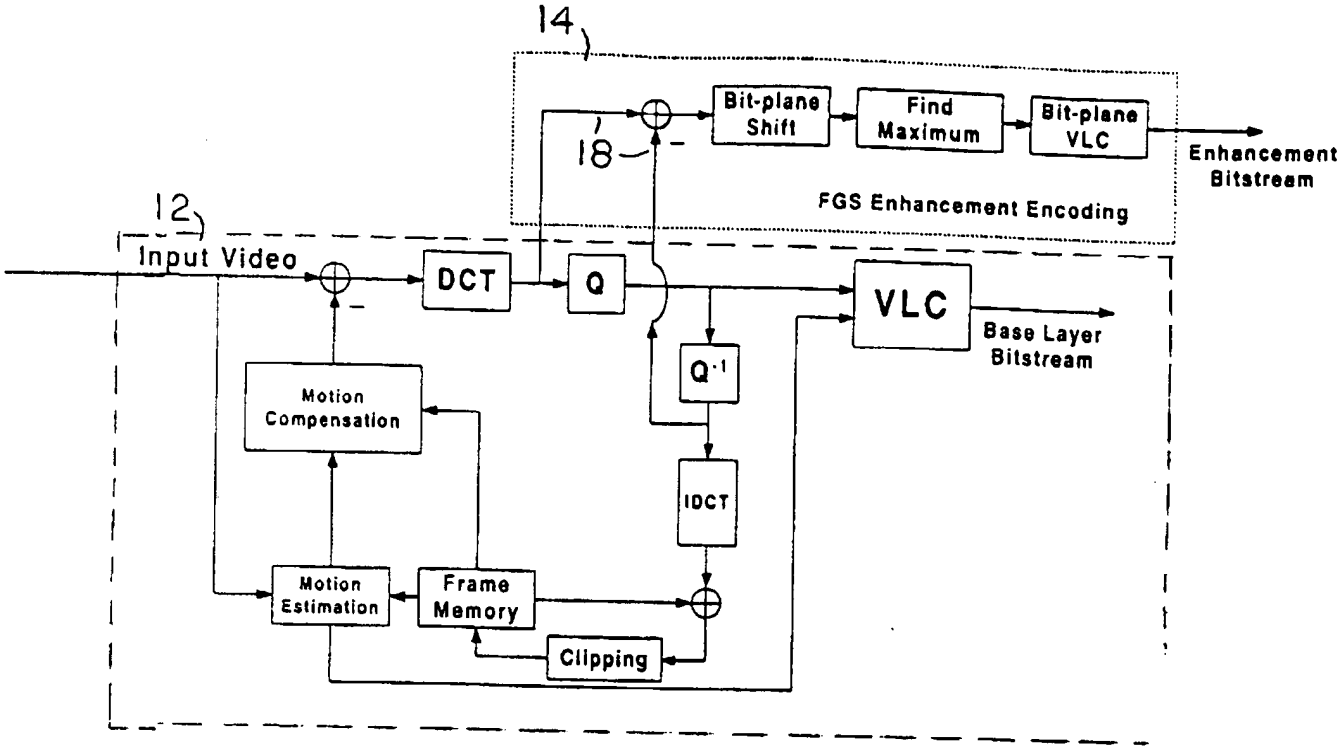
14
18
Bit-plane Shift
Find Maximum
Bit-plane VLC
Enhancement Bitstream
FGS Enhancement Encoding
12
Input Video
DCT
Q
VLC
Base Layer Bitstream
Q-1
Motion Compensation
IDCT
Motion Estimation
Frame Memory
Clipping
10

FIG. 1

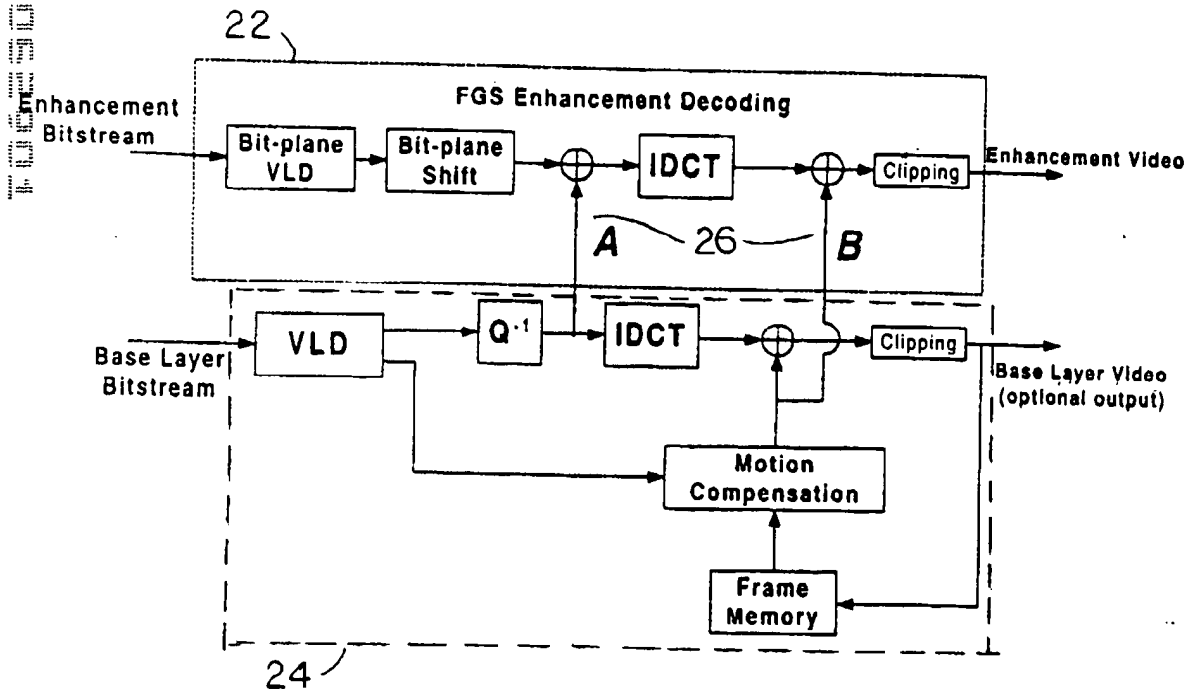
22
FGS Enhancement Decoding
Enhancement Bitstream
Bit-plane VLD
Bit-plane Shift
IDCT
Clipping
Enhancement Video
A
26
B
VLD
Q-1
IDCT
Clipping
Base Layer Bitstream
Base Layer Video (optional output)
Motion Compensation
Frame Memory
24

FIG. 2

20

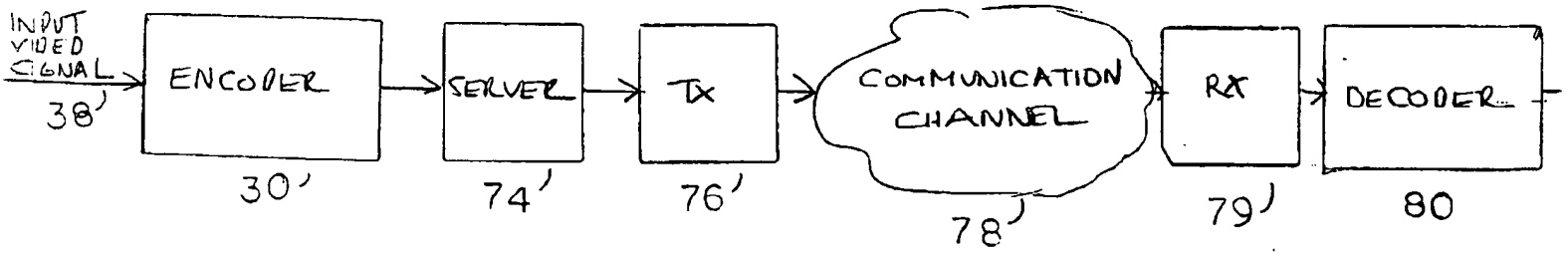
INPUT VIDEO SIGNAL
38'
ENCODER
30'
SERVER
74'
Tx
76'
COMMUNICATION CHANNEL
78'
Rx
79'
DECODER
80

FIG. 3

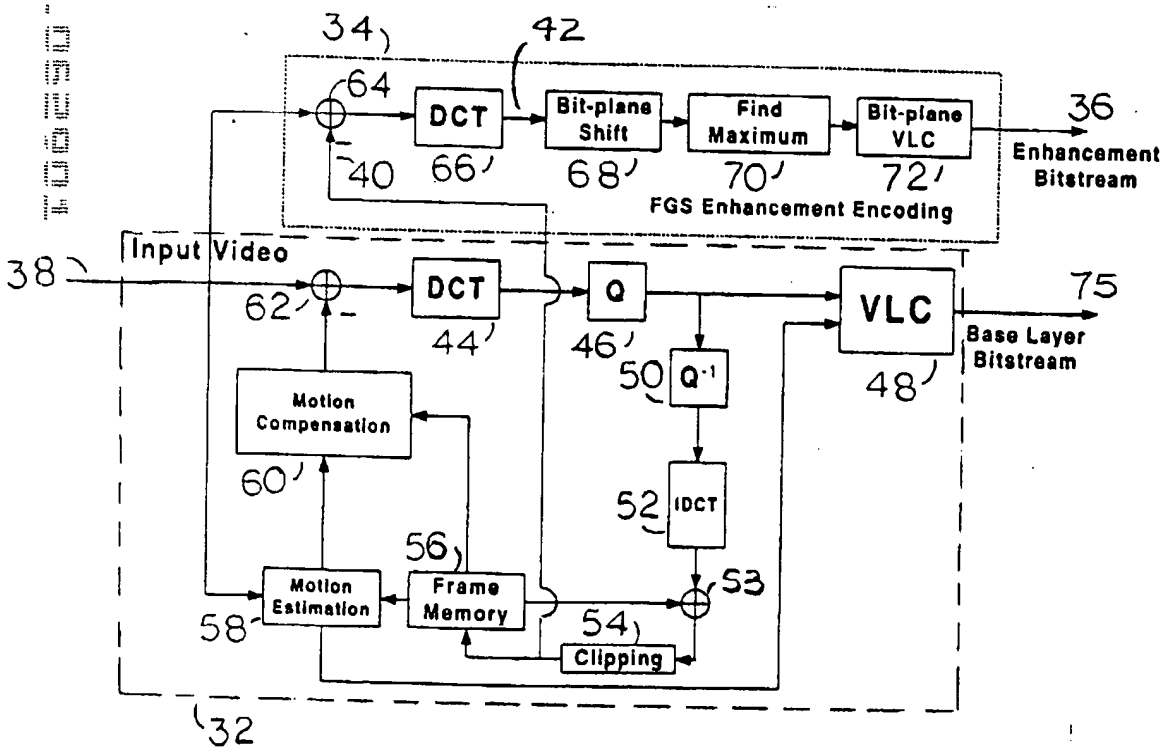
34
42
64
DCT
Bit-plane Shift
Find Maximum
Bit-plane VLC
36
Enhancement Bitstream
40
66'
68'
70'
72'
FGS Enhancement Encoding
Input Video
38
62'
DCT
44'
Q
46'
VLC
48'
75
Base Layer Bitstream
50
Q-1
52
IDCT
53
Motion Compensation
60'
56
Frame Memory
Motion Estimation
58
54
Clipping
32

FIG. 4

30

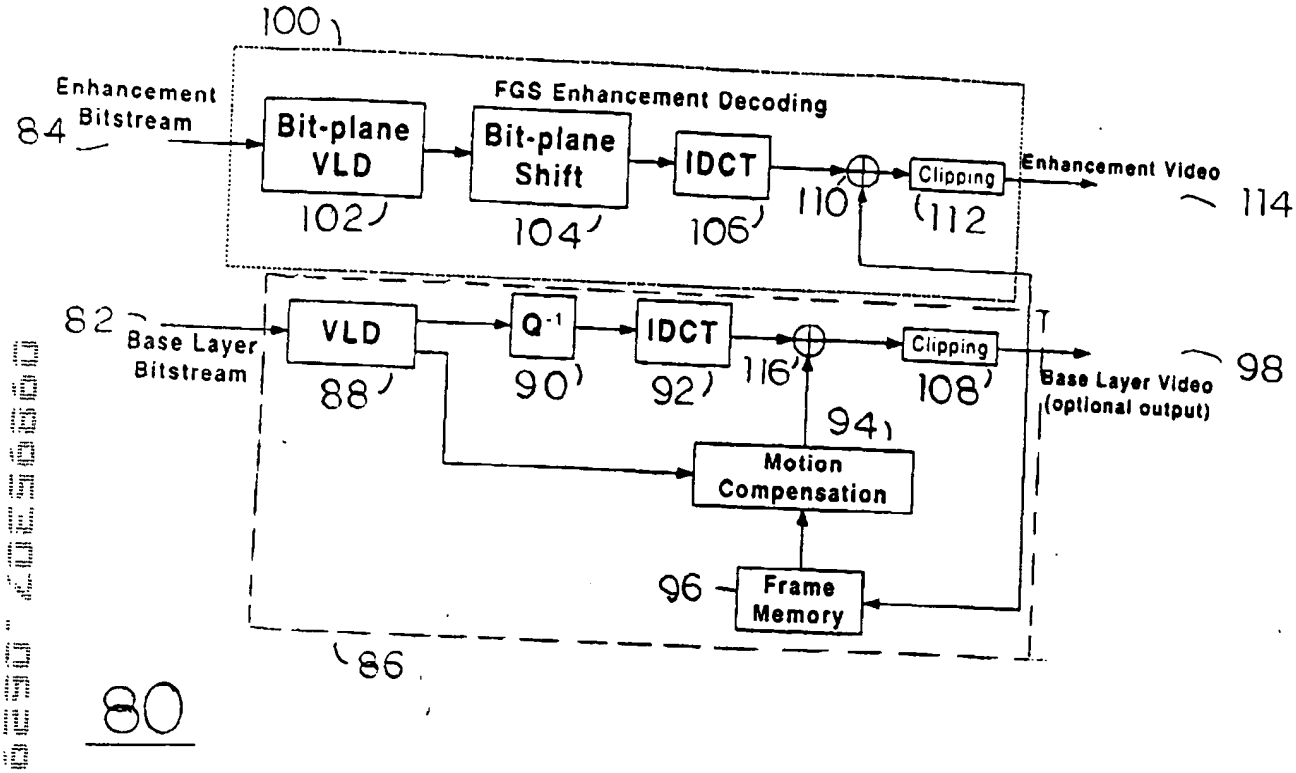
100
Enhancement Bitstream
84
FGS Enhancement Decoding
Bit-plane VLD
102
Bit-plane Shift
104
IDCT
106
110
Clipping
112
Enhancement Video
114
82
Base Layer Bitstream
VLD
88
Q-1
90
IDCT
92
116
Clipping
108
Base Layer Video (optional output)
98
94
Motion Compensation
96
Frame Memory
86
80

FIG. 5